

***Lobelia dortmanna* L.**  
water lobelia  
Campanulaceae (Harebell Family)

**Status:** State Threatened

**Rank:** G4S2S3

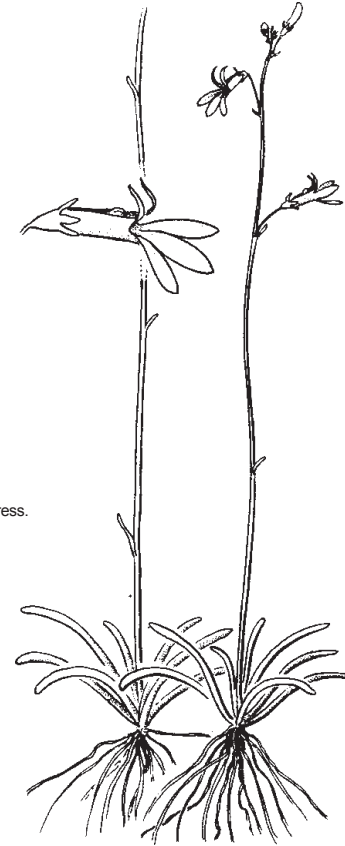
**General Description:** Plants are aquatic perennials with only the inflorescence generally emergent, up to 3 ft (1 m) tall; leaves terete, hollow, all in a basal rosette; stems hollow and essentially naked; flowers pedicellate, pedicels without bractlets, flowers pale blue or white, borne in terminal racemes or solitary in upper axils; corolla irregular, inverted so that the 3-lobed upper lip is on the lower side; corolla tube dorsally split (between the two lobes of the actual upper lip) to below middle, generally to near base, often perforated with holes or translucent areas as well; filaments and anthers connate, 2 anthers; stigma 2-lobed; seeds with square base at one end, dehiscent near top.

**Identification Tips:** *Lobelia kalmii* is similar to *L. dortmanna*; the former has linear to spatulate leaves which are cauline as well as basal, pedicels that generally have two bracteoles near the middle, and seeds which are acute at both ends. In contrast, *L. dortmanna* has hollow, terete leaves in a basal rosette, pedicels without bractlets, and seeds with a square base at one end. Additionally, *L. dortmanna* can be distinguished by its hollow, essentially naked stems, and generally only its flowers are emergent from the water. Though the basal leaves generally remain submerged, the flowers and cauline leaves of *L. kalmii* are emergent.

**Phenology:** The reproductive cycle lasts from May until September, with flowering usually occurring beginning in June and lasting through August. The flowers are self-pollinated. Flowers form on the plant above and below the water surface. The under water flowers do not produce a corolla and are closed throughout the period of their development. About the end of June, some of the inflorescences rise above the water, and flowers with a blue and white corolla appear. Most individuals fruit during July; the underwater fruits generally open first (Szmeja, 1987).

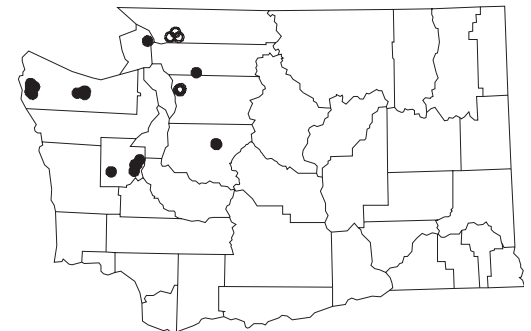
**Range:** Intermittently circumboreal; Vancouver Island and adjacent mainland British Columbia, south to northern Oregon; Newfoundland to Michigan; northwestern Europe; scattered in Washington from King County, north to Whatcom County and west to Clallam County.

***Lobelia dortmanna***  
water lobelia



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Illustration by Jeanne R. Janish

Known distribution of  
*Lobelia dortmanna*  
in Washington



● Current (1980+)  
○ Historic (older than 1980)

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2003 Produced as part of a cooperative project between the Washington Department of Natural Resources, Washington Natural Heritage Program and the U.S.D.I. Bureau of Land Management. Persons needing this information in an alternative format, call (360) 902-1600 or TTY (360) 902-1125.

## ***Lobelia dortmanna***

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**Habitat:** The species occurs in shallow water at the margins of lakes and ponds.

**Ecology:** *Lobelia dortmanna* is an evergreen perennial which retains a living, reduced stem for at least three consecutive growing seasons. Individuals grow year round. Specimens in the shallowest portion of a population's habitat may not overwinter as well. Ecological conditions appear to be most stable in the deeper water zones, presumably leading to a uniform age structure within populations. *Lobelia dortmanna* is an indicator of oligotrophic lakes, which possess exceptionally clear and transparent waters (Szmeja, 1987).

**State Status Comments:** *Lobelia dortmanna* is known from nine lakes in Whatcom, Snohomish, Clallam, King, Skagit, San Juan, and Mason counties.

**Inventory Needs:** Margins of lakes and ponds from King to Whatcom counties and in Clallam, San Juan, and Mason counties.

**Threats and Management Concerns:** A major threat to the species is the application of herbicides used to control water milfoil, a common aquatic weed. Additional threats include shoreline development, water pollution due to the use of recreational equipment, and trampling.

### **References:**

Hitchcock, C.L. and A. Cronquist. 1973. *Flora of the Pacific Northwest*. University of Washington Press, Seattle, WA. 730 pp.

Szmeja, J. 1987. The seasonal developments of *Lobelia dortmanna* L. and annual balance of its population size in an oligotrophic lake. *Aquatic Botany*, 28:15-24.

Szmeja, J. 1987. The structure of a population of *Lobelia dortmanna* L. along a gradient of increasing depth in an oligotrophic lake. *Aquatic Botany*, 28: 1-13.

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